The Siemens Energy Professional Series

SEPS 400

At a glance
Whether it is training for power system engineers, commissioning engineers, control room operators, or field maintenance and repair personnel, Siemens Power Academy TD – North America (NA) and the consultants at Siemens Energy Inc., Siemens Power Technologies International (Siemens PTI) want to be your comprehensive partner in T&D training and professional development. We offer:

- Professional certifications
- Training for career progression
- Short courses designed to teach technical skills quickly
- Courses at our training centers or customized on-site delivery
- Expert instructors and practical content that counts.

The Siemens Power Academy TD – NA believes that training is a component critical to the success of any organization. With our long history in the fields of power generation, transmission and distribution, instrumentation and controls, equipment-based training and emerging technology, Siemens offers training solutions along the entire power conversion chain.

The challenge
The energy industry, like any other, is supported by professionals in finance, marketing, human resources, management, legal and of course, engineering. Therefore, it stands to reason that power engineers are not the only ones who need to understand how the electric power systems works. In order to provide service and implement the changes that will enhance the system’s performance, improve reliability, and integrate renewable and other green technology initiatives, non-technical professionals need to possess a practical understanding of the factors that drive the energy industry.

Our solution
The Siemens Energy Professionals Series (SEPS) is a five-course series designed for anyone who needs to cultivate an understanding of the physical, financial and future drivers of the electric power grid. Professionals in customer service, finance, project management, marketing or engineers transitioning from the civil or mechanical disciplines will benefit from this course.

Enroll in SEPS 400 - Siemens Energy Professionals Series, which includes all of the following full and half-day courses or take them individually:

SEPS 305 – The Physical Grid – Day 1
- The evolution of the electric system design
- The Basics – Who's who: Hertz, Faraday, Volta, Ohm, Watt and others
- An overview of the major grid components: generation, substation, transmission, distribution, metering
- Reliability and operations
- Roles and players: the physical grid organization chart – Gens, TO, LSEs, ISOs/RTOs
- Regional differences
- Physical grid drivers and limitations.

SEPS 315 – Managing Grid Projects, an Overview – Day 2
- The process, scheduling and controls tools used in power system project management
- An overview of the environmental, regulatory, community and planning challenges power project managers and stakeholders must consider during a project lifecycle
- Current events, such as the impact of coal fleet retirements, ARRA stimulus funding, and renewable portfolio standard impacts, are given as examples.
SEPS 320 – The Financial Grid – Day 3
- The laws of supply and demand
- Understanding the electricity value chain
- Regulated and deregulated electric utilities and electric markets
- Roles and players: the financial grid organization chart – suppliers, customers and market participants and their economic drivers
- Market design: financial tools, risk mitigation and profit strategies
- Location-based pricing – market information systems
- Reliability and security issues, system gaming and IT issues.

SEPS 325 – The Future of the Grid – Day 4, Morning Session
- Integration of renewables, electric cars, Smart Grids and CO2-neutral cities
- Financial issues, credit, derivatives, cap-and-trade
- Environmental challenges, NOx/SOx
- Social issues related to siting generation and transmission, workforce issues
- Governmental initiatives affecting the growth of generation, transmission and distribution systems to meet future demand, security and environmental challenges.

SEPS 330 – Smart Metering and Smart Grids – Day 4, Afternoon Session
- Smart Grids – the requirements of a modern distribution network
- AMR (Automatic Meter Reading)
- Energy IP – meter data management
- Future of utility business models
- Smart meter solutions.

Course structure
This is a four (4) day course. Material is presented in both morning and afternoon sessions for a total of six (6) hours of daily instruction. Standard course hours are 9:00 am to 4:00 pm each day.

Documentation
A bound set of course notes, including printed copies of the instructor’s presentation and relevant handouts, are provided to each course participant. Students enrolled in the entire SEPS 400 series will also receive an electronic copy of the Siemens Power Engineering Guide.

Instructors
All courses offered through Siemens Power Academy TD – NA and Siemens PTI are developed and taught by leading industry engineers. In addition to their proven instructional ability, our engineers have advanced degrees complemented by first-hand knowledge and experience solving power system problems throughout the world.

Benefits of certification
Earning Siemens Power Academy TD – NA professional certification enhances your path to productivity, sets you apart from your peers, adds depth to your understanding of the field and ability to meet the demand for skills in the global market place. With fewer available on-the-job resources, engineers who invest in rigorous training and gain certification will be in exceptionally high demand at the world’s leading utilities and system operators.

Earn Siemens Power Academy TD – NA Certification in the following programs: Power Systems Technology, Distribution Systems Technology, or PSS® Network Planning and Analysis. Professionals can pursue certification at the Associate, Advanced, or Expert Levels. Contact your Siemens Power Academy Training TD – NA to get started today.

Continuing Education Units (CEUs), Professional Development Hours (PDHs) and NERC Continuing Education Hours (CEHs)
Licensed engineers, on a voluntary or mandated basis, attend continuing professional education for licensure renewal to ensure competency. All courses offered through Siemens Power Academy TD – NA meet the requirements for CEUs and PDHs. Many courses qualify for CEHs as well.

Siemens Power Academy TD – NA is recognized by the North American Electric Reliability Corporation as a continuing education provider who adheres to NERC Continuing Education Program criteria.

NERC Approved CEH Provider

Convenient training locations
Siemens Power Academy TD – NA provides scheduled training at the following offices:
- Burlington, Ontario, Canada
- Houston, TX USA
- Littleton, CO USA
- Minnetonka, MN USA
- Mountain View, CA USA
- Orlando, FL USA
- Schenectady, NY USA

Host this course at your company
View the SEPS 400 Course Schedule on the Web at: https://siemens.coursewebs.com/siemen s/pageCourseInfo.aspx?Course_ID=sep s400

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